

REMARKS/ARGUMENTS

Claims 5-21 are pending in this application. Claims 6, 8-10, 12-15, 17 and 21 are withdrawn in response to a Restriction Requirement. Applicants reserve the right to pursue these claims in a divisional application. In response to a previous election of species requirement, Applicants elected the species of Structure A wherein R₂ is OH, R₃ is H, R₄ is NO₂, R₅ is H and R₆ is H. In view of the remarks made herein, Applicants respectfully request reconsideration of claims 5, 7, 11, 16, and 18-20.

Rejections under 35 U.S.C. §103(a)

Claims 5, 7, 11, 16 and 18-20 are rejected under 35 U.S.C. § 103(a) as unpatentable over Clifford *et al.* (Chem. Abst. 130:232097, hereinafter referred to as “Clifford”), or and D’Ambrosio, (Chem. Abst. 134:65874, hereinafter referred to as D’Ambrosio) in view of Konig *et al.* (DE 2,300,107, hereinafter referred to as “Konig”).

Applicants respectfully submit that the combination of Clifford, D’Ambrosio and Konig do not teach or suggest which substitutions on the phenyl ring are likely to yield compounds that induce apoptosis in cancer cells and which substitutions will not. In their specification, Applicants have provided comparative data showing that the species currently being examined, the arylretinamide wherein R₂ is OH, R₃ is H, R₄ is NO₂, R₅ is H, and R₆ is H, is much more effective at both inhibition of cancer cell growth and induction of apoptosis in MCF-7 cells than other compounds with similar structures. See, Applicants’ specification page 43, Table 1, and Figure 4.

Considering the teachings of Clifford, D’Ambrosio and Konig as a whole, at most, it would have been obvious to try different combinations of functional groups on the phenyl ring of the claimed arylretinamide, which is an improper rationale for combining references. (MPEP § 2145 X). Clifford and D’Ambrosio, in view of Konig provide no more guidance than to suggest several different groups that may be tried at different positions of the phenyl rings, without providing specific guidance as to which groups in which positions would yield compounds that induce apoptosis in a cancer cell. Clifford and D’Ambrosio teach specific compounds, while Konig lists possible substitutions without teaching which substitutions would

be beneficial. D'Ambrosio specifically states that "there were significant differences in the growth inhibitory responses of [the] cell lines to selected retinoids and non-retinoid analogs" but offers no specific guidance for selecting functional groups. (See D'Ambrosio, Abstract). As Applicants show in Table 1 in their specification, both the functional groups and the positions of those functional groups on the phenyl ring can vary both a specific compound's effectiveness at inhibition of cancer cell growth. Figure 4 further shows that the functional groups and the positions of the functional groups on the phenyl ring further affect the compound's ability to induce apoptosis in cancer cells. Applicants respectfully submit that the superior properties of compound 18, as shown in Table 1 and Figure 4, would not be expected from the combination of Clifford and D'Ambrosio, in view of Konig.

In view of the remarks made herein, Applicants respectfully request reconsideration of claims 5, 7, 11, 16 and 18-20 and that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

CALFEE, HALTER & GRISWOLD LLP

By 
Kristin J. Frost
Reg. No. 50,627
Tel.: (216) 622-8895